

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action.

Claim Rejections – 35 USC § 103

Claims 1-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Caro in view of Hasegawa. Claims 1, 2, 5 and 6 have been amended. Claims 3, 4 and 7-12 have been canceled.

The amended claims require “calculating an elastic modulus of a region including a tunica intima and tunica media of said vascular wall and excluding a tunica adventia of said vascular wall.” As discussed in the present application at page 26, paragraph 34, endothelium dependent vasodilation is primarily observed on the vascular wall *in the region of the tunica intima and tunica media*. Significant changes in elastic modulus in the region of the tunica intima and tunica media can be seen when avascularization is stopped (page 25-26, paragraph 33). However, no significant change in elastic modulus is seen in the tunica adventia. Accordingly, a diagnosis of vascular endothelial function can be made based on changes in the elastic modulus of the vascular wall occurring in a region including the tunica intima and tunica media but excluding the tunica adventia (page 27, paragraph 35-36). Such a concept is not suggested by the prior art of record.

Caro teaches to calculate an arterial elastic modulus from the thickness of the artery wall (23:29-34). However, Caro does not teach to calculate an elastic modulus of a region excluding a tunica adventia of the vascular wall.

Hasegawa teaches an elastic modulus for an n-th layer within an arterial wall. However, Hasegawa does not describe what the layers are or include. It follows, then, that Hasegawa does

not teach a layer including the tunica intima and tunica media of the vascular wall and excluding the tunica adventia of the vascular wall.

The claims further require storing or displaying changes over time of the elastic modulus when the artery is avascularized and the avascularization is then stopped. Neither cited reference teaches to store or display changes over time of the elastic modulus when the artery is avascularized and the avascularization is then stopped. The Examiner did not address these limitations in the Office action. Caro teaches applying an occlusive cuff to a patient to determine a pressure-velocity relationship. However, nothing in Caro suggests storing or displaying elastic modulus changes over time when an artery is avascularized and the avascularization is then stopped.

In view of the above-discussed deficiencies of the cited references with respect to the claimed subject matter, applicants respectfully submit that the pending claims are allowable over said references.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any fees resulting from this communication, please charge same to our
Deposit Account No. 16-0820, our Order No.: NIHE-40596.

Respectfully submitted,
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